

Name \_\_\_\_\_

Homework 16  
Section 4.4

1. (2) Write the following exponential expressions as an equivalent logarithmic expression.

a)  $10^m = 356$

b)  $7^q = \frac{V}{3}$

2. (2) Write the following logarithmic expressions as an equivalent exponential expression.

a)  $\log_c(2r) = T$

b)  $\ln 85 = K^2$

3. (4) Expand the logarithm  $\log_2\left(\frac{5R^3}{PQ}\right)$  completely.

4. (4) Write the expression  $\log_5 x - 2\log_5 y + \log_5 z$  in the form  $\log_b P$ .

5. (3ea) Use  $\log_b 2 = A$ ,  $\log_b 3 = B$ ,  $\log_b 5 = C$  and the properties of logs to evaluate the following expressions.

(a)  $\log_b 15$

(b)  $\log_b 16$

(c)  $b^{A+C}$